

REMARKS

Applicants hereby traverse the outstanding rejections, and request reconsideration and withdrawal in light of the remarks contained herein. Claim 1 has been amended to correct a typographic error. New claims 12-27 have been provided for consideration. Claims 2, 3, and 9 have been canceled, and claims 1, 4-8, 10-27 are pending in this application.

Specification

The specification has been amended to include a further description of Figure 4. As the values that have been written into the specification has been taken from Figure 4, no new matter is believed to have been entered.

Rejections under 35 U.S.C. § 103

Claims 1, 6, and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Melamed et al. (3,975,694, hereinafter Melamed) in view of Plaessmann et al. (5,615,043, hereinafter Plaessmann).

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. § 2143. Without conceding the first and second criteria, Applicants assert that the rejection does not satisfy the third criteria.

The Office Action admits that Melamed does not teach having 1) that the end of the laser rod closest to the convex mirror is also convex and 2) the laser rod arranged asymmetrically between the mirrors. The Office Action attempts to cure this deficiency by introducing Plaessmann, which the Office Action alleges to teach that an end of a gain medium may be given a convex shape. The Office Action states that when the front mirror is ground into the rod, then the rod will be asymmetrically located between the mirrors. However, this combination, as presented, does not teach or suggest all limitations of the claimed invention.

Claim 1 defines a stable resonator wherein the laser rod is arranged asymmetrically between the output mirror and the rear mirror. The Office Action admits that Melamed does not teach this limitation. Applicants also note that Plaessmann also does not teach this limitation. The Examiner is assuming that having the output mirror of Melamed made integral with the laser rod will result in asymmetry. The Applicants believe that this assumption is faulty, as the convex mirror may be moved to be proximate to the end of the laser rod, thus resulting in a symmetrical cavity. The teachings of both of the Examiner's references disclose symmetry of the cavity; nothing in the references teaches or suggests asymmetry. Therefore, the Applicants respectfully assert that for the above reasons claims 1 is patentable over the 35 U.S.C. § 103(a) rejection of record.

Claims 6 and 10 depend from base claim 1, and thus inherit all limitations of claim 1. Each of claims 6 and 10 sets forth features and limitations not recited by the combination of Melamed and Plaessmann. Thus, the Applicants respectfully assert that for the above reasons claims 6 and 10 are patentable over the 35 U.S.C. § 103(a) rejection of record.

Claims 4-5, 7-8, and 11 are rejected as rejected under 35 U.S.C. § 103(a) as being unpatentable over Magni et al article entitled "Recent Developments in Laser Resonator Design", (hereinafter Magni), in view of Chesler et al. (3,680,000, hereinafter Chesler).

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art cited must teach or suggest all the claim limitations. See M.P.E.P. § 2143. Without conceding the second and third criteria, Applicants assert that the rejection does not satisfy the first criteria.

The Office Action admits that Magni does not teach having the output end of the laser rod be convex. The Office Action attempts to cure this deficiency by introducing Chesler, which the Office Action alleges to teach having such an limitation. The motivation for making the combination was presented as follows:

“It would have obvious ... to make the end convex in this manner in order to achieve a large TEM mode radius, as taught by Chesler.”

It is well settled that the fact that references can be combined or modified is not sufficient to establish a prima facie case of obviousness, M.P.E.P. § 2143.01. The convex end of Chesler does not appear to provide a large TEM mode radius. In fact, as shown in FIGURE 3, the convex end reduces the radius of the TEM mode, where lines 36, 38 are diverging until reaching the lens 31, then begin converging. Thus, the convex end of Chesler reduces the TEM mode radius. Thus, the stated motivation does not provide any desirability to include the convex end of Chesler into the system of Magni. Therefore, the provided motivation is merely a statement that the reference can be modified, and does not state any desirability for making the modification. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ.2d 1430 (Fed. Cir. 1990), as cited in M.P.E.P. § 2143.01. Thus, the motivation provided by the Examiner is improper, as the motivation must establish the desirability for making the modification.

No valid suggestion has been made as to why a combination of Magni and Chesler is desirable. Therefore, the rejection of claims 4-5, 7-8, and 11 should be withdrawn.

New claims 12-27 are presented for consideration by the Examiner. Basis for the subject matter exists with the specification, including the amendments made to the specification. No new matter is believed to have been entered.

Conclusion

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Application No.: 09/049,676

Docket No.: LANGHANS
(65821-P001US-10312434)

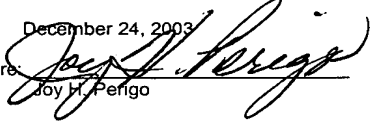
Applicant believes no fee is due with this response. However, if a fee is due, please charge Deposit Account No. 06-2380, under Order No. 65821-P001US-10312434, from which the undersigned is authorized to draw.

Dated: December 24, 2003

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as Express Mail, Airbill No. EV256035346US, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: December 24, 2003

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